

## ENVIRONMENTAL MANAGEMENT SYSTEMS: NATIONAL TECHNOLOGY TRANSFER AND ADVANCEMENT ACT OF 1995 (NTTAA)

### Background:

This is one of a series of Information Briefs produced by EH-41 that discuss Environmental Management Systems (EMSs), their implementation, and relationship to other DOE environmental initiatives. An EMS is a means for organizations to improve the effectiveness of their efforts to manage their environmental compliance responsibilities. A number of voluntary EMS standards have been developed by industry groups and consensus standards bodies. The International Organization for Standardization (ISO) incorporated many elements from these standards into the ISO 14001 Environmental Management System Standard. This consensus standard provides a framework of the core elements of an EMS designed to accommodate a range of diverse international applications. In March 1995, the National Technology and Transfer and Advancement of 1995 (NTTAA), was signed into law, and included provisions that require federal agencies to use, where possible, technical standards developed by consensus organizations. These provisions are enfolded in the Office of Management and Budget's (OMB) Circular A-119 "*Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities.*" The NTTAA definition of standards encompasses the ISO 14000 series including the ISO 14001 EMS standard.

### References:

1. "*Environmental Management Systems Primer for Federal Facilities*" DOE/EH-0573. U.S. Department of Energy, Office of Environmental Policy and Assistance, and Federal Facilities Enforcement Office, U.S. Environmental Protection Agency, June 1998
2. "*Environmental Management Systems – Frequently Asked Questions*," U.S. Department of Energy, Office of Environmental Policy and Assistance, October 1996
3. ISO 14001 "*Environmental Management Systems – Specification with Guidance for Use*," International Organization for Standardization, 1996
4. ISO 14004, "*Environmental Management Systems – General Guidance on Principles, Systems, and Supporting Techniques*," International Organization for Standardization, 1996
5. Public Law 104-113, "National Technology and Transfer and Advancement of 1995"
6. OMB Circular A-119; "*Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities*," 63 FR 8546, February 19, 1998
7. DOE Order 1300.2A, "*Department of Energy Technical Standards Program*," May 19, 1992
8. "*EPA Position Statement on Environmental Management Systems and ISO 14001 and a Request for Comments on the Nature of the Data To Be Collected From Environmental Management System/ISO 14001 Pilots*," 63 FR 12094, March 12, 1998

### What is an Environmental Management System (EMS) and what is ISO 14001?

An EMS is a systematic approach to ensuring that environmental activities of an organization are well managed. An EMS incorporates a voluntary set of procedures that ensure consistency in evaluating the environmental implications of an organization's actions, help improve such efforts, and help foster more effective management of environmental obligations, including regulatory compliance (References 1 and 2).

Over the last 30 years diverse groups of organizations,

associations, private corporations, and governments have developed and implemented various EMSs and voluntary consensus EMS standards. Examples of voluntary consensus EMS standards include the European Eco-Management and Audit Scheme [EMAS] introduced in 1993 by European Union Council Regulation Number 1836/93, whose aim is to increase the use of market based mechanisms to improve environmental performance of European industries; and British Standard 7750 introduced in 1992 by the British Standards Institute as "*Specification for Environmental Management Systems - BS7750*" that is designed to evaluate the EMS performance, define policy, practices,



objectives and targets; provide a catalyst for continuous improvement, and provide a framework for development and assessment of the resultant EMS. The International Organization for Standardization (ISO), consisting of representatives of industry, government, non-government, and other entities, has formulated a series of international standards for EMSs. The first was specified in 1996 as the ISO 14001 EMS standard (Reference 3). This standard provides a basis for organizations to achieve sound environmental performance by managing their operations in an internationally consistent manner, as well as providing guidelines for promoting improved environmental performance. The ISO 14001 standard for EMSs offers the core elements of an EMS that will enable an organization to accomplish its goals and objectives in an environmentally sound and effective manner.

ISO 14001 is unique among the ISO 14000 series of standards because it can be objectively audited by internal evaluations or for third-party certification. International standards are increasingly recognized as evolving into critical elements in the global market. As globalization of trade in diverse market areas continues, the ISO 14000 series of international standards are seen to be the emerging tools for promoting industry practices to achieve environmentally sustainable development. (For further information consult References 1 and 3.)

### **What is the National Technology Transfer and Advancement Act of 1995 (NTTAA)?**

On March 7, 1996, President Clinton signed the National Technology Transfer and Advancement Act of 1995, into law (PL 104-113) (Reference 5). This act amended the earlier Stevenson-Wydler Technology Innovation Act of 1980, that described inventions and intellectual

property under cooperative research and development agreements between federal agencies and the private sector. It also amended other acts including the National Institute of Standards and Technology Act (15 U.S.C. 271) and the Fastener Quality Act (15 U.S.C. 5401). The NTTAA codified the existing policies of the Office of Management and Budget (OMB) Circular A-119 (Reference 6), established reporting requirements, and authorized the National Institutes of Standards and Technology to coordinate conformity assessment activities.

“Conformity assessment” for both government and private entities includes product certification, accreditation of testing, and calibration.

### **What has the NTTAA of 1995 got to do with EMSs, ISO 14001, and OMB Circular A-119?**

Of primary importance to the focus of this information brief is that section 12(d) of the NTTAA included provisions which directed federal agencies to use, whenever possible, voluntary consensus technical standards to carry out their policy objectives and activities, and to participate in the development of voluntary standards. “Technical standards,” through the laws’s definition, include the ISO 14000 EMS standard series. OMB Circular A-119 implements section 12(d) of the NTTAA, and provides guidance for policies to reduce reliance on government-unique standards and the promotion of standards developed by consensus. OMB has recently revised Circular A-119 in order to make its terminology consistent with the NTTAA. The policies of Circular A-119 are intended to encourage federal agencies to benefit from the expertise of the private sector; promote federal agency participation in such bodies to ensure creation of standards that are useable

### **Section 12(d) of the NTTAA of 1995: Consensus Technical Standards by Federal Agencies**

- (1) In general.--Except as provided in paragraph (3) of this subsection, all Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments.
- (2) Consultation; participation.--In carrying out paragraph (1) of this subsection, Federal agencies and departments shall consult with voluntary, private sector, consensus standards bodies and shall, when such participation is in the public interest and is compatible with agency and departmental missions, authorities, priorities, and budget resources, participate with such bodies in the development of technical standards.
- (3) Exception.--If compliance with paragraph (1) of this subsection is inconsistent with applicable law or otherwise impractical, a Federal agency or department may elect to use technical standards that are not developed or adopted by voluntary consensus standards bodies if the head of each such agency or department transmits to the Office of Management and Budget an explanation of the reasons for using such standards. Each year, beginning with fiscal year 1997, the Office of Management and Budget shall transmit to Congress and its committees a report summarizing all explanations received in the preceding year under this paragraph.
- (4) Definition of technical standards.--As used in this subsection, the term “technical standard” means performance- based or design-specific technical specifications and related management systems practices.



by federal agencies; and reduce reliance on government-unique standards where an existing voluntary standard would suffice (except where inconsistent with the law or otherwise impracticable). The ISO 14001 standard for EMSs is a voluntary consensus standard, hence the policies of OMB Circular A-119 encourage its use.

### **What are the goals in Government use of voluntary standards such as ISO-14001 for EMSs?**

The goals are to eliminate costs of the Government developing its own standards, provide incentives for standards that better serve national needs, encourage efficient economic growth, and promote government reliance on the private sector. OMB Circular A-119 states that all federal agencies must use voluntary consensus standards in lieu of government-unique standards in their procurement and regulatory activities, except where inconsistent with law or otherwise impractical.

### **Is federal participation in voluntary consensus standards bodies required?**

Yes. OMB Circular A-119 states that agencies must consult with voluntary consensus standards bodies, both domestic and international, and must participate with such bodies in the development of voluntary consensus standards when consultation and participation is in the public interest. For example, several federal agencies, including DOE, are currently participating in a U.S. Technical Advisory Group on the ISO 14000 EMS standard series.

### **What is DOE required to do about the use of standards?**

OMB Circular A-119 directs that, no later than December 31 of each year, DOE needs to report to the National Institute of Standards and Technology (NIST)--the federal coordinator for government entities responsible for the development of technical standards and conformity assessment activities--the Department's decisions to use government-unique standards in lieu of existing voluntary consensus standards. In addition, DOE is required to establish a process to identify, manage, and review any DOE development and use of standards.

### **What is DOE doing?**

DOE Order 1300.2A, issued in 1992, (Reference 7) has already set forth policy, assigned responsibility, and

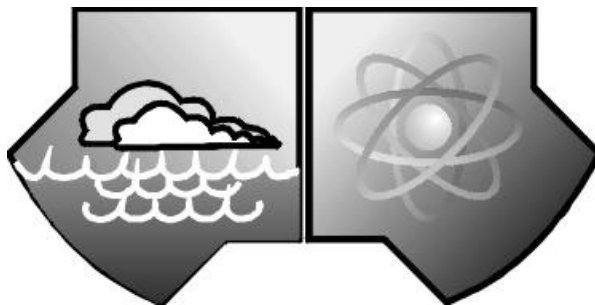
provided requirements for development and implementation of technical standards in DOE facilities, programs, and projects; provided for participation in non-Government standards bodies; provided for establishment of a DOE Technical Standards Program; and assigned responsibility for the management of a DOE-wide program. The Assistant Secretary for Nuclear Energy (NE-1), was assigned responsibility for ensuring the implementation of OMB Circular A-119 and developing the policies and procedures to implement a DOE standards program, and the Director of the DOE Office of Nuclear Safety, Policy and Standards (EH-31) was assigned responsibility for coordination and management of a DOE technical standards program.

### **Where can I get additional information on EMSs and ISO 14001?**

More information on Environmental Management Systems and ISO 14001 can be found in Reference 1 and Reference 8. The latter communicates the EPA's position regarding EMSs, including those based on the ISO 14001 standard. It also describes the evaluative stage EPA is entering concerning EMSs. Further, it solicits comments on proposed categories of information to be collected from a variety of sources that will provide data for a public policy evaluation of EMSs.

#### **Training and technical assistance**

EH-41 will provide training and technical assistance. A series of EMS briefs or guidance documents are now available or are being developed. Examples that are already available and that can be downloaded from the Internet at <http://tis-nt.eh.doe.gov/oepa/> include: *Environmental Management Systems Primer for Federal Facilities*, DOE/EH-0573, 12/97 (Reference 1, produced in collaboration with EPA's Federal Facilities Enforcement Office), and *Frequently Asked Questions on Environmental Management Systems*, 1996 (Reference 2). For further information, please contact Larry Stirling by phone at (202) 586-2417, or e-mail at [john.stirling@eh.doe.gov](mailto:john.stirling@eh.doe.gov).



**Post Office, if unable to deliver please return to:**

Larry Stirling (EH-412)  
U.S. Department of Energy  
1000 Independence Ave., S.W.  
Room GA076  
Washington, D.C. 20585  
(202) 586-6374

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